

12/14/2005 10/766,645 Doty

L15 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:433929 CAPLUS

DOCUMENT NUMBER: 141:15676

TITLE: Composition and method for low temperature deposition of silicon-containing films such as films including silicon, silicon nitride, silicon dioxide and/or **silicon oxynitride**

INVENTOR(S): Wang, Ziyun; Xu, Chongying; Laxman, Ravi K.; Baum, Thomas H.; Hendrix, Bryan; Roeder, Jeffrey

PATENT ASSIGNEE(S): Advanced Technology Materials, Inc., USA

SOURCE: PCT Int. Appl., 69 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004044958	A2	20040527	WO 2003-US36097	20031112
WO 2004044958	A3	20040826		

US 2004096582	A1	20040520	US 2002-294431	20021114
US 2004138489	A1	20040715	US 2003-699079	20031031
EP 1567531	A2	20050831	EP 2003-781915	20031112

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

PRIORITY APPLN. INFO.: US 2002-294431 A 20021114
US 2003-699079 A 20031031
WO 2003-US36097 W 20031112

OTHER SOURCE(S): MARPAT 141:15676

AB Si precursors for forming Si-containing films in the manufacture of semiconductor devices, such as low dielec. constant (k) thin films, high k **gate** silicates, low temperature Si **epitaxial** films, and films containing Si nitride (Si₃N₄), **silicon oxynitride** (SiO_xN_y) and/or SiO₂. The precursors of the invention are amenable to use in low temperature (e.g., < 500° or <300°) CVD processes, for fabrication of ULSI devices and device structures.

IC ICM H01L

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L15 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:10933 CAPLUS

DOCUMENT NUMBER: 136:78294

TITLE: Semiconductor device having a **gate** electrode with a sidewall insulating film and manufacturing method thereof

INVENTOR(S): Hokazono, Akira; Takayanagi, Mariko

PATENT ASSIGNEE(S): Kabushiki Kaisha Toshiba, Japan

SOURCE: U.S. Pat. Appl. Publ., 17 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002000611	A1	20020103	US 2001-892574	20010628
US 6545317	B2	20030408		
JP 2002026310	A2	20020125	JP 2000-199627	20000630
US 2003141551	A1	20030731	US 2003-364411	20030212
US 6927459	B2	20050809		

PRIORITY APPLN. INFO.: JP 2000-199627 A 20000630
US 2001-892574 A3 20010628

AB A **gate** electrode is provided via a **gate** insulating film formed between the source and **drain** regions on a semiconductor substrate, in which the sidewall of the **gate** electrode excluding the exposed part formed at the upper part thereof facing the source and **drain** regions is covered with a sidewall insulating film, and an **epitaxial** film is formed on the exposed part of the sidewall of the **gate** electrode but not formed on a top surface of the **gate** electrode. An element isolation region formed on the semiconductor substrate is composed of a 1st insulating film formed in the semiconductor substrate and a 2nd insulating film which is formed inside the 1st insulating film and has a lower **epitaxial** growth rate than that of the 1st insulating film, and the surface of the source and **drain** regions is covered with a Si layer, part of which runs onto the surface of the 1st insulating film.

IC ICM H01L029-76

ICS H01L029-94; H01L031-062

INCL 257333000

CC 76-3 (Electric Phenomena)

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FILE 'STNGUIDE' ENTERED AT 15:44:06 ON 13 DEC 2005

FILE 'REGISTRY' ENTERED AT 15:48:47 ON 13 DEC 200

L5 11 SEA ABB=ON PLU=ON N O SI/MF

L7 429 SEA ABB=ON PLU=ON N O SI/ELF

FILE 'CAPLUS' ENTERED AT 15:50:29 ON 13 DEC 2005

L8 6635 SEA ABB=ON PLU=ON SILICON OXYNITRIDE OR SION OR ((SI OR
SILICON) (W) ((OXI OR OXIDE) (W)NITRIDE))

L9 7631 SEA ABB=ON PLU=ON L5 OR L7 OR L8

L10 494353 SEA ABB=ON PLU=ON EPITAX? OR SEED? OR NUCLEAT?

L11 205 SEA ABB=ON PLU=ON L9 AND L10

L12 457719 SEA ABB=ON PLU=ON GATE OR TRENCH OR DRAIN OR INTERCONNECT OR
DAMASCENE OR CHANNEL OR CONDUCT? (2A) PLATE

L13 57 SEA ABB=ON PLU=ON L11 AND L12

E EPITAXIAL FILM/CT

E E5+ALL

L14 8934 SEA ABB=ON PLU=ON "EPITAXIAL FILMS"/CT

L15 9 SEA ABB=ON PLU=ON L13 AND L14

D IBIB ABS HITSTR HITIND 1-9

FILE 'CAPLUS' ENTERED AT 16:06:51 ON 13 DEC 2005

L17 48 SEA ABB=ON PLU=ON L13 NOT L15

D IBIB ABS HITSTR 1-48